PUBLIC HEARING FOR NONCONFORMANCE PENALTIES FOR ON-HIGHWAY HEAVY-DUTY DIESEL ENGINES

Ann Arbor Michigan

March 5, 2012

10:06 a.m.

Presider

Chris Grundler

Panel Members

Michael Horowitz

Matthew Spears

Chuck Moulis

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1 Ann Arbor, Michigan 2 10:06 a.m. 3 MR. GRUNDLER: Good morning. Welcome to 5 today's hearing. My name is Chris Grundler and I'm the 6 Deputy Director of EPA's Office of Transportation and 7 Air Quality, and I'll be the presiding officer for this hearing today. I've got a brief statement that I need 8 9 to read and then we'll get started. 10 We're hearing testimony today on both the 11 Interim Final Rule and the Notice of the Proposed Rulemaking establishing nonconformance penalties or NCPs 12 13 for heavy-duty diesel engines that could be used by 14 manufacturers of heavy-duty diesel engines unable to 15 meet the 2010 model year NOx emission standards. These 16 provisions allow a manufacturer to produce and sell 17 nonconforming engines upon payment of a penalty. 18 The regulations being considered today were 19 published in the Federal Register on January 31st, 2012, 20 and the public comment period for this closes on the 21 4th of April 2012. 22 To my right representing EPA with me is 23 Michael Horowitz from the Office of the General Counsel.

To my left is Matt Spears and Chuck Moulis of my office.

Before getting started, I'd like to note that

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we're conducting this hearing in accordance with section 307(d)(5) of the amended Clean Air Act which requires EPA to provide interested persons with an opportunity for oral presentation of data, views or arguments, in addition to an opportunity to make written submissions. This hearing provides the opportunity for such oral presentations.

The official record of this hearing will be kept open until April 4th, 2012, for the submission of rebuttal and supplemental testimony. The hearing will be conducted informally, and formal Rules of Evidence will not apply. The Presiding Officer, however, is authorized to strike statements from the record which are deemed irrelevant or needlessly repetitious and to enforce reasonable limits on the duration of the statement of any witness. Given that we only have four testifiers, I don't think that will be a problem today.

Witnesses should state their name and affiliation prior to making their statement. When a witness has finished his or her presentation, members of this panel will have an opportunity to ask questions related to the testimony. Witnesses are reminded that any false statements or false responses to questions may be a violation of law. Witnesses will have a chance later in the hearing to provide rebuttal and

1 supplemental testimony. In addition, witnesses can submit rebuttal and supplemental testimony until 2 3 April 4th, 2012. If any members of the audience that wish to 5 testify have not already signed up, please submit your 6 name at the reception table and we'll try to accommodate 7 everyone who wishes to testify. Everyone attending should also send -- sign the register at the reception 8 9 table whether or not you testify. 10 Finally, if you would like a transcript of the 11 proceedings, you should make arrangements directly with 12 our court reporter during one of the breaks. 13 Before we begin, are there any clarifying 14 questions that you would like to address? 15 We are now going to take a role call of those 16 listening in by phone. If there is anyone on the phone, 17 please identify yourselves. 18 MS. LAVENGOOD: Carol (inaudible). 19 STENOGRAPHER: Carol -- speak up. Introduce 20 yourself again and speak up, please. 21 MS. LAVENGOOD: Yes. This is Carol Lavengood 22 with Cummins. 23 MR. GRUNDLER: Anyone else on the phone? MS. AULT: This is Susan Ault with Volvo. 24 25 MR. KAYES: David Kayes, Daimler. 5

1 STENOGRAPHER: Spell your names, please, as 2 you go. MR. KAYES: Last name K-A-Y-E-S. MR. GRUNDLER: Anyone else? MR. SMITH: David Smith with Volvo. 5 6 MR. TASIK: Yes, Carl Tasik, Volvo. 7 STENOGRAPHER: Spell it, please. MR. TASIK: That's Tasik, T-A-S-I-K. 8 9 MR. GRUNDLER: Anyone else on the phone? 10 Okay. We'll begin with our first speaker John Wall of Cummins. Welcome. 11 12 Following Mr. Wall will be Anthony Grezler of 1.3 Volvo, Don Keski of Daimler, and Steven Covey of 14 Navistar. 15 MR. WALL: Good morning. Thank you for the 16 opportunity to testify on the proposal to establish 17 nonconformance penalties for heavy-duty diesel engines. 18 My name is John Wall. I'm the Chief Technical Officer 19 of Cummins, Inc. 20 Headquartered in Columbus, Indiana, Cummins designs, manufactures, distributes and services engines 21 22 and related technologies for a variety of applications 23 all over the world. The company is an advocate for 24 consistent and responsible regulations that provide 25 environmental benefit and recognize the needs of

business by offering clear direction and incentives to manufacturers that create innovative solutions.

The Heavy-Duty Highway Rule that EPA finalized in 2001 embodies these aspects. Over ten years ago, EPA and the industry started on a collaborative path to achieve near-zero emissions of particulate matter and oxides of nitrogen for on-highway heavy-duty engines. The regulation provided clarity, certainty and lead-time to achieve the stringent standards. The Agency also included flexibility mechanisms to help manufacturers comply such as the ability to average, bank and trade credits and a phase-in period from 2007 through 2009 to meet the NOx standard.

Recently, EPA came to the conclusion that a manufacturer was unable to achieve this NOx standard.

As a result, the Agency is establishing Non-Conformance Penalties or NCPs. Under the Clean Air Act, NCPs permit a manufacturer who cannot meet an emission standard for technological reasons to continue to sell non-conforming engines by paying a monetary penalty until they can comply. Importantly and as stated by EPA in their proposal, the Clean Air Act NCP provisions require that the penalty be set at such a level that it removes any competitive disadvantage to a complying manufacturer.

In other words, it should cost less to comply than not

to comply. Unfortunately, EPA did not meet this requirement in the Interim Final Rule, as the penalty levels enacted are too low. This discrepancy must be addressed appropriately in the Final Rule that is the subject of this meeting.

the penalty level in their rulemaking documents. We agree that this is a -- this is complicated and requires a careful and deliberate process. That is why we are strongly opposed to EPA taking action as an Interim Final Rule without prior proposal and public comment. EPA should follow due process to allow all parties to contribute their expertise and perspective to create a sound final rule. We, along with others, have taken action on EPA's use of an Interim Final Rule process, so we will focus our comments today on the proposed rulemaking.

Cummins has unique expertise as a global engine manufacturer that gives us firsthand experience with evaluating the cost of compliance for this situation and helping the Agency determine the appropriate level for the penalties. We employ the broadest technology portfolio in the industry to meet emissions standards around the world for on and off-highway products.

The Heavy-Duty Highway Rule finalized in 2001 did not mandate any specific technology. Instead, the regulation laid out a ten-year roadmap for ever tightening emission standards. Cummins evaluated each step along with customer requirements to determine the right technology approach from a suite of options. In 2002, this involved the adoption of cooled Exhaust Gas Recirculation or EGR to reduce NOx. The particulate matter standards dropped significantly in 2007, which led to the application of diesel particulate filters or DPFs.

After achieving a 99 percent reduction in particulate matter, the next significant challenge was NOx. In 2007, Cummins was the first diesel engine manufacturer to certify in all 50 states to the stringent 2010 NOx standard. In partnership with Chrysler, we used a NOx Adsorber catalyst for the 6.7 liter Turbo Diesel to achieve this milestone a full three years ahead of the schedule laid out by EPA.

Looking ahead to meeting the NOx standard for the rest of our engines, Cummins considered a range of technological solutions. We initially announced that we would use Selective Catalytic Reduction or SCR for our midrange engines and an EGR-only solution for heavy-duty. However, in 2008, as we continued to

develop both systems, we saw significant improvements in SCR efficiency and durability for heavy-duty applications and decided to adopt SCR across all of our heavy-duty and midrange engines in the US except for the Chrysler pickup.

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Thus, the question before the Agency over the cost of compliance is not an intellectual exercise for Cummins. We know exactly what it takes to change direction and adopt the technology needed to comply with the NOx standard. And we, along with our customers, could not be happier with our choice to use SCR.

Customer "report cards" on the 2010 launch indicate this has been their best ever experience with emissions-driven technology change. In addition to improved reliability, the Cummins SCR system is delivering up to six percent better fuel economy than the engines we produced in 2009. Indeed, the heavy-duty on-highway engines we sell today are the most efficient engines we have ever made at almost zero levels of NOx and particulate matter.

SCR is continuing to improve and prove -- and provides a foundation for the future. We continue to improve the conversion efficiency of the SCR system which is leading to even greater fuel economy improvements. This moves us well down the path of

meeting the new greenhouse gas and fuel efficiency standards adopted by EPA and NHTSA.

Cummins SCR-equipped engines are working effectively not just in the lab but under real-world driving conditions to deliver the required NOx emission reductions. By controlling exhaust temperatures through thermal management, Diesel Exhaust Fluid or DEF is being dosed to reduce NOx emissions under a wide range of conditions, including stop and go, cold and lightly loaded operation. Cummins has demonstrated particulate matter and NOx control and full SCR system operation in ambient temperatures from 0 degrees to over 110 degrees Fahrenheit.

Additionally, Cummins continues to work with EPA through guidance documents and certification to ensure that the operator maintains the necessary supply of DEF on the vehicle and does not interfere with the proper function of the SCR system. Separate examinations by the California Air Resources Board, American Trucking Association, Cummins and others have all confirmed that commercial vehicle operators are not risking their time or money on trying to circumvent the SCR system.

With that being said, let's be clear that today's discussion is not about SCR versus EGR or any

other technology. Cummins engines use both SCR and EGR.

This is about setting the appropriate level for

penalties for any manufacturer, that after more than

10 years of lead time, does not comply with EPA's NOx

standard.

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Cummins invested over 200 million dollars to comply, and according to media reports, heavy-duty truck prices increased by \$10,000 and medium-duty truck prices increased by \$6,000 as the emissions surcharge for 2010-compliant equipment. Yet, EPA has proposed maximum penalties of only \$,1900 for heavy heavy-duty engines and less than \$700 for medium heavy-duty engines. While the NCP calculation involves a variety of considerations, it is clear that the penalties put forth by EPA are significantly lower than what was experienced commercially.

One of the main challenges highlighted by EPA was that compliant manufacturers have not designed and optimized in-production engines for the U.S. market at 0.5 grams per horsepower hour NOx. This is not true. There are Cummins engines for sale at Family Emission Limits of up to .5 grams per horsepower hour NOx using credits. These are useful, practical examples of optimization at the higher NOx levels.

By reducing NOx emissions more than required $% \left(1\right) =\left(1\right) +\left(1\right$

in the past, Cummins generated NOx emissions credits to be -- that could be applied today and in the future. This is a win for the environment because it delivered greater reductions sooner and because the credit balance is discounted before it can be withdrawn for use, ensuring a net absolute benefit for the environment in 7 addition to an early benefit. Thus, we are able to certify some engines at emissions levels up to .5 grams 9 per horsepower hour NOx, we have engines at .35 grams 10 per horsepower hour, and we have engines at .2 grams per horsepower hour. These engines are all optimized to provide the best solution for our customers taking into 12 13 account cost, reliability, durability and fuel economy. 14 Why did we do this? At a higher NOx level, we

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are able to deliver even greater fuel efficiency savings for our customers.

Cummins is now fully engaged in making the technological changes necessary to reduce these engine emissions to .2 grams per horsepower hour NOx. We're advancing technology to drive down NOx while remaining -- maintaining and even improving fuel efficiency. The product comparisons in this -- in this NCP rulemaking are not a hypothetical exercise for Cummins but are part of our development work going on right now in our technical centers. We know exactly the development, hardware, operational and other impacts of this change. Cummins provided this as confidential business information to the Agency in the months leading up to this rulemaking and will submit written comments over the next few weeks.

The Agency correctly recognizes in their NCP rulemaking that optimized engines at .5 grams per horsepower hour NOx and .2 grams per horsepower hour NOx must be compared. However, this is not how the analysis was conducted.

Instead of using available, real-life experience as the basis for their calculation, and even though stated differently in their technical support document, EPA's analysis actually started with a fully compliant engine as its baseline. The Agency then backed off DEF consumption and made small hardware changes with no change to fuel consumption at higher NOx, creating a hypothetical .5 gram per horsepower NOx engine that would not be competitive in the marketplace and completely missing the point of operating at higher NOx levels. Cummins is certified at a higher NOx level and using credits specifically because of the well-known NOx-fuel consumption relationship.

Furthermore, the SCR system efficiency implicit in the EPA hypothetical non-compliant engine

was far berow -- below ordinary system performance.

This further distorts the cost comparison and underestimates the cost of compliance because the cost of the hardware in the hypothetical noncompliant system is too high.

Simply put, the Agency did not follow its own methodology of comparing optimized engines at both the upper limit and the standard. Since the .5 gram per horsepower hour NOx engine that EPA selected was essentially already compliant to .2 grams NOx, it carried the full cost of compliance in the baseline. Thus, the EPA analysis significantly understates the cost of compliance. In effect, these penalty levels leave the cost of compliance higher than the cost of noncompliance, which is the wrong way around.

In summary, it's important to step back and look at the big picture. EPA's Heavy-Duty Highway Rule finalized in 2001 is one of the most significant environmental accomplishments in this nation. Cummins is proud to have been a partner with EPA and all U.S. heavy-duty engine manufacturers in developing the rule, and we have delivered technologies and products that comply.

We support the principle in the Clean Air Act for setting NCPs so that manufacturers who invested and

are achieving the emissions standards and their customers should not be penalized compared to manufacturers who do not comply.

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Furthermore, manufacturers, especially those with SCR systems which are capable of full compliance, should not be enticed to pay NCPs to produce noncompliant engines because it's more cost effective to be noncompliant than it is to comply.

And vehicle owners and operators who buy compliant engines should not be penalized compared to their competitors who purchase noncompliant engines.

Please don't miss this point. This is not about EGR versus SCR. It is not about one company against the world. It's about all of us. It's about compliant SCR versus noncompliant SCR. If the NCPs are too low, all of us will be forced into noncompliance by simple market economics.

EPA needs to set the NCPs at the appropriate level to ensure the cost of compliance is not greater than the cost of noncompliance. It's as simple as that.

We urge the Agency to follow due process expeditiously and finalize a sound rule that ensures all manufacturers are treated fairly and that the emissions reductions as envisioned by the landmark 2001 rule are fully realized.

1	Cummins appreciates the opportunity to testify
2	today. We'll provide this testimony and additional
3	written comments to the EPA docket.
4	Thank you.
5	MR. GRUNDLER: Thank you, Mr. Wall. Any
6	questions for Mr. Wall?
7	MR. SPEARS: I do not have any questions.
8	MR. HOROWITZ: None.
9	MR. WALL: Thanks.
10	MR. GRUNDLER: Thanks for coming.
11	Mr. Grezler.
12	MR. GREZLER: Are you going to put my slides
13	up?
14	(Discussion off record.)
15	MR. GREZLER: While she's doing that I can
16	I can go ahead and introduce myself. I'm Anthony
17	Grezler. Good morning. I'm Vice President for
18	Government & Industry Relations with Volvo Group Truck
19	Technologies, and I'm here today representing Mack
20	Trucks and the Volvo Group.
21	I'd like to just start by thanking the EPA for
22	allowing me to make this statement today on an issue
23	that we consider to be of great importance to
24	Mack Trucks, to the Volvo Group, to the trucking
25	industry and to society.

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1 Can you go ahead --2 MS. IFFLAND: (Indicating). MR. GREZLER: I can do it? MS. IFFLAND: Yep. Thank you. 5 MR. GREZLER: 6 Over the next few minutes I will expand on 7 three fundamental points, the first being that Navistar does not qualify for nonconformance penalties because 8 9 they do not fit the definition of a technological 10 laggard. Secondly, that even if NCPs are to be granted 11 to Navistar the penalties must be much higher than proposed in order to avoid unjustly penalizing the 12 1.3 manufacturers who met the standard and to protect the 14 public by creating a sufficient disincentive for 15 exceeding emissions standards in the future. And third, 16 that there was no good cause for the unprecedented 17 Interim Final Rule under which Navistar has already 18 received two certificates of conformity. 19 Let me expand on the first point. First, 20 Navistar is not a technological laggard, which is 21 necessary to be eliqible for nonconformance penalties 22 within the framework of the Clean Air Act. 23 A technological laggard is considered to be a 24 manufacturer who cannot meet a particular emissions 25 standard due to technological, not economic,

difficulties and who in the absence of NCPs might be forced from the marketplace.

The 2010 emissions rule was promulgated in 2001. It went into effect in 2007 and it was fully phased in on January 1st, 2010.

It is now 11 years after the rule was finalized, five years after it took effect, and more than two years since all other manufacturers became fully compliant. Any reasonable effort to develop a compliant product could have been implemented by now.

This slide shows reductions associated with emissions changes in the last 14 years and the near-zero NOx requirement in 2010. Every manufacturer except Navistar met this standard as required in 2010.

In fact, Navistar has never publically expressed any inability to meet the standard and has on the contrary consistently positioned itself as a technological leader. During January -- during Navistar's January 2009 quarterly earnings conference, the company chairman, president and CEO said that the question that continues to arise all over the industry is why are we doing EGR and everybody else is doing SCR, and the answer for us is simple: Because we can do both and we're the only ones that can do both and will show you that we can do it.

It's very clear that Navistar could indeed do both and could have met the .2 grams standard had they chosen to. As early as 2006 the company's subsidiary MWM International Motores was displaying heavy-duty engines with -- equipped with SCR technology. And if you visit Navistar's corporate website today, you'll find detailed specifications for an SCR equipped version of the company's MaxxForce engine.

In March 2011, Navistar's chairman and CEO further stated relative to questions about their technological capability "what we did is we submitted to EPA a certification of .2 to take that argument away. We don't plan on using this for awhile, but we're going to have it out there on the shelf. It says it can be done and we can meet the standards."

Finally, as recently as February 1st, 2012, a Navistar executive was quoted saying during the company's analyst day event that they are ready with an engine that does meet the 2010 standard but won't release it for sale because they can't get optimum performance and fuel economy.

It's very clear that Navistar had access to the same proven SCR technology that every other manufacturer is using to meet the 2010 standard. They chosen another path which they continue to claim as

recently as a few weeks ago can meet the standard.

Based on Navistar's own words and actions EPA cannot categorize the company as a technological laggard and therefore cannot grant the company NCPs.

Even if Navistar did qualify for NCPs, the penalty proposed by EPA is grossly insufficient given the investments other manufacturers had to make in order to comply with the 2010 standard, the competitive advantage being given to Navistar, and the societal impact of allowing one manufacturer to continue to emit more than two and a half times the NOx limit two years after the standard went into effect.

In order to develop a fair and just NCP, EPA must engage in formal, detailed discussions with manufacturers regarding those manufacturers' cost of compliance and the competitive disadvantage they will face if certain players are allowed to sell noncompliant engines.

These formal discussions did not take place with Volvo and Mack prior to promulgation of the Interim Rule, and the informal input that we were asked to provide on very short notice was clearly not taken into account in development of the proposed NCPs.

 $\hbox{ It is not easy for us to calculate what it } \\ \hbox{ would have cost us to reach .5 grams of NOx rather than }$

the required .2 grams because it never occurred to us that staying at .5 grams was even an option. It should be noted that the difficulty and therefore the cost of meeting the 2010 standard far exceeded the difficulty and cost of meeting the 2004 standard. Having said this, the calculations we've conducted over the last several weeks have led us to conclude that the cost differential to go from .5 gram to .2 is at least \$11,600 per engine.

That \$11,600 figure also seems to be more in line with EPA's own calculations for determining NCP's in the past. The NCPs promulgated in 2004 for the 2004 rule called for a penalty of \$15,508 for NOx emissions at two and a half times the standard. The EPA ruled at that time that exceeding the 2004 standard by even .3 grams against a much easier target merited a penalty of \$2,200. Why should Navistar be allowed to pay less than that for emitting two and half times the 2010 standard.

Furthermore, since the NCPs are designed to address a lag in implementation, the lag time should be measured beginning with the date which the standard went into effect; in this case January 1st, 2010. Navistar should therefore be in the third year for penalty escalation which would increase penalties over year one.

None of these calculations take into account another factor that should be reflected in a fair NCP; that is, the negative commercial impact that compliant manufacturers like Mark -- Mack and Volvo suffer when some manufacturers are given an unfair advantage and therefore a greater share of the market.

Let's be clear. EPA is allowing Navistar to sell cheaper, dirtier engines, and because they are dirtier they are also more fuel efficient than they would be if they had to be at the .2 gram standard. This significantly affects Navistar's competitive position in the marketplace. If we were allowed to target .5 gram NOx level, we could have designed a lower cost engine with even better fuel efficiency contrary to EPA's assumption. The trade-off between NOx and fuel efficiency is well-known, and even though SCR provides for imfu — improved efficiency versus EGR at the same NOx level, there is still an opportunity for fuel efficiency improvements of about 2 percent if we could have targeted a half gram level.

EPA's recognition of the trade-off between NOx and fuel efficiency has been inconsistent of late, which has worked in Navistar's favor. The agency did not recognize the trade-off in the noncompliance penalty rule, where doing so would lead to a higher penalty.

But it was recognized in the recent heavy-duty greenhouse gas rule in which EPA provided a substantial concession to Navistar by allowing the company to significantly increase their greenhouse gas emissions if they moved from .5 gram to .2 gram NOx level. The EPA further notes in the greenhouse gas rule that the Agency expects significant gains in fuel efficiency if FCR manufacturers improve NOx catalyst conversion efficiency. Allowing tailpipe NOx to increase has a similar effect on fuel efficiency.

In terms of impact on the U.S. economy, it should also be noted that any sales Mack and Volvo have lost or will lose as a result of Navistar's unfair advantage means fewer trucks built in America by American workers in American factories. We do not build any trucks outside the U.S. for this market. Navistar, on the other hand, built in Mexico and nearly half the class A vehicles that it sold in the U.S. over the past two years.

Lastly, from a purely environmental standpoint the NCPs are not sufficient to reflect the egregiousness of Navistar's noncompliance. More than two years after the implementation of a standard they knew about nine years in advance Navistar's products continue to spew two and a half times the NOx limit. And the currently

proposed penalty represents only a slap on the wrist.

Finally, although we are discussing the NPRM, I would like to take this opportunity to object to the unprecedented Interim Final Rule under which Navistar has already received two certificates of conformity.

The EPA stated in the Interim Final Rule that there is no risk to the public interest in ignoring past practice and rushing through NCPs without allowing for the full process and industry input. If there is no risk to the public in allowing a manufacturer to emit two and a half times the standard two years after it took effect, one wonders why we have a standard at .2 grams to begin with.

Navistar was very open for several years about their strategy of using credits after 2010 and has been using them for more than two years. If they were in danger of running out of credits before they were able to produce an engine that meets the standard, they should have requested nonconformance penalties early enough to allow for a proper process. The fact that they did not take this step should not work to their advantage. It appears that in this case, as in so many others, they have succeeded in manipulating the system.

An NCP by its very nature requires input from complying manufacturers to establish appropriate penalty

levels, yet EPA stated in the Interim Final Rule that in this case notice and comment on the rule were impractical, unnecessary, or contrary to the public interest, while inventing a new rationale for fabricating inputs into its NCP formula. For all the reasons previously cited, Mack and Volvo strongly disagree.

In closing, I will say that for many years now Mack and Volvo trucks have been working in good faith for the Environmental Protection Agency. We invested more than 425 million dollars in going from the 2007 to 2010 emissions standards. We were the first to have EPA certification of our heavy-duty engines and we met the .2 gram standard without credits. We delivered on our commitments to the industry, to the environment, and to society.

While we don't expect any rewards for doing the right thing, we don't expect to be penalized either. But that is exactly what you will be doing to us and to the rest of the compliant manufacturers if you follow through with the currently proposed NCP level. Neither justice nor the environment is served when noncompliance and manipulation of the system are permitted to pay off in a competitive advantage.

On behalf of Volvo and Mack I thank you for

1 the opportunity to address these important issues, and 2 as always we stand ready to assist you in any way as you 3 continue your deliberations. Thank you. MR. GRUNDLER: Thank you. I have one 5 question. Do -- does Mack or Volvo have information 6 that you could provide to me today or subsequent to 7 today with respect to the market impacts you're referencing concerns about loss of market sales --8 9 market share or market sales to Navistar, can you 10 provide that information? 11 MR. GREZLER: Yeah. I can't give you the details today, but we will do so within the comment 12 13 period. But clearly any -- any sales that are given to 14 noncompliant manufacturers are sales where we -- we lose 15 a portion of that market. And it has a big impact on 16 our -- our profitability because of the marginal profit 17 of additional sales. But we can provide that and will 18 do so. 19 MR. GRUNDLER: Thank you. Have any questions? 20 MR. SPEARS: I have no questions. 21 MR. HORWOITZ: None. 22 MR. GREZLER: Okay. 23 MR. GRUNDLER: Thank you for coming. 24 Mr. Keski of Daimler. 25 MR. KESKI-HYNNILA: Morning. My name is Don 27

Keski-Hynnila. My title is Manager of Compliance and Regulatory Affairs at Detroit Diesel Corporation.

Daimler Trucks North America and Detroit

Diesel welcome this opportunity to present publically
our comments on EPA's Notice of Proposed Rulemaking
establishing nonconformance penalties for on-highway
heavy-duty engines for the 2010 NOx standard and the
EPA's Interim Final Rule which became effective
January 31st, 2012.

We at DTNA and DDC have enjoyed a very good working relationship with the EPA, for example, on the greenhouse gas regulations, to which we recently certified our Model Year 2013 heavy-duty truck products one year early. Additionally, we recently completed an EPA selective engine audit, the results of which confirmed compliance of our SCR equipped Detroit branded heavy-duty on-highway engines to the very stringent .2 gram per brake horsepower hour NOx standard.

That said, the recent NCP NPRM and Interim

Final Rule have not followed suit. As EPA knows from

our stay request, DTNA and DDC do not believe that EPA

has met the statutory and regulatory requirements for

establishing this NCP. The EPA would have benefited

from formal comments before the Interim Final Rule

became effective. We hope that EPA carefully considers

and that the Final Rule reflects the comments that EPA receives today and the more detailed written comments that will be submitted later during this comment period.

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Comments today are directed in two general areas, the first being that EPA has not met the legal criteria required to issue NCPs, and the second of which is that EPA has not met statutory requirements for determining the appropriate penalty amount.

I'll start with our comments regarding EPA not having met the legal re -- legal criteria required to issue NCPs.

NCPs are intended to provide a limited exception to meeting regulatory emissions standards where EPA finds that the regulatory lead time it has provided is insufficient to enable manufacturers to develop the technology necessary to meet the standards. By paying NCPs, such manufacturers are allowed on a limited basis to produce and sell engines that do not comply with the standard. Congress recognized that an escape clause is desirable under certain limited circumstances where the required technology does not yet exist so that technological laggards are not immediately forced out of the marketplace when EPA promulgates the more stringent standards.

The Clean Air Act permits EPA to establish

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NCPs within certain specified statutory limits. By regulation the specific additional criteria must be met for EPA to establish the availability of NCPs and to set an NCP amount for a given emission standard. In establishing NCPs for the 2020 -- 2010 NOx standard available to heavy-duty engines in model years 2012 and 2013, and proposing to establish NCPs available to medium and heavy-duty engines in model years 2012 and later, EPA has not met the statutory and regulatory requirements.

First, there is no new or revised emission standard in 2012. There must be a new or revised emission standard that is more stringent than the previous standard for the pollutant, or the existing standard for the pollutant must become more difficult to achieve because of new or revised standards. Here there is no new or revised NOx standard. The standard is the same for 2012 as it was for 2010, and it was promulgated in 20 -- 2001 with adequate notice to manufacturers.

All of EPA's previous NCP rulemakings were conducted before or at the same time that the emission standards were taking effect. Most were established one to two years before the standards became effective. For example, NCPs for the 2004 standards were promulgated in 2002, two years before the standards became effective.

It is now 2012, 11 years after the NOx standards were promulgated in 2001 and two years after the NOx standard became fully effective. The regulatory provisions cannot reasonably be read to allow for such belated NCP determination.

In attempting to justify its establishment of NCPs, EPA conveniently ignores the fact that it is now 2012 and instead focuses it on the fact that the 2010 standard was lower than the 2004 standard. EPA also states, quote, when promulgated in 2001 the Agency concluded that the .2 gram per horsepower hour NOx standard was a technology force in standard, end quote. EPA's conclusion 11 years ago has no bearing on whether there now exists a new or revised and more stringent emission standard applicable to the current 2012 model year for which EPA seek — seeks to set NCPs.

Substantial work is no longer required to meet the 2010 NOx standard. EPA must find that substantial work will be required to meet the emission standard.

Substantial work is defined as, quote, the application of technology not previously used in an engine or vehicle class or subclass, or the significant modification of existing technology or design parameters needed to bring the vehicle or engine into compliance, end quote.

EPA cannot find that substantial work is required to meet the 2010 NOx standard now that the SCR has been used successfully in heavy-duty diesel engines, including engines manufactured by Navistar for other markets.

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The rest of the industry was able to implement SCR in time to meet the 2010 NOx standard. Now, nonconforming manufacturers face a much easier task to implement SCR technologies, since their competitors have laid out the difficult ground work, developing new technology, gearing up suppliers and establishing the necessary infrastructure required for an effective SCR solution. EPA has recognized that this situation where all engine manufacturers except one already met the standard cannot justify a substantial work finding where the Agency — Agency said obviously substantial effort would not be required if many manufacturers' vehicle engines were already meeting the revised standard or could do so with relatively minor calibration changes or modifications.

While substantial work was required before model year 2010, it could no longer be said to be needed in 2012, two years after SCR was implemented in the same class of engine by every other manufacturer in the industry. For EPA to insist otherwise gets the

regulatory analysis backwards. Such an approach would justify NCPs any time new technology is used to meet an emission standard, a result Congress surely did not intend under the Clean Air Act.

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There is no technological laggard. EPA must find that there is likely to be a techno -technological laggard, which EPA has explained is, quote, a manufacturer who cannot meet the emission standard due to technological, not economic, difficulties and who in the absence of NCPs might be forced from the marketplace, end quote. The distinction between true technological laggards and economic laggards, particularly intentional economic laggards, is critical here. Quote, NCPs were intended to give a manufacturer that has made every effort to comply but has been unable to achieve compliance a chance to continue to participate in the marketplace, end quote, and as EPA has said an emission standard may become more difficult to meet and substantial work may be required for compliance, but if that work merely involves transfer of well developed technology from another vehicle class it is unlikely that a technical laggard would develop, end quote.

It is undisputed that SCR is a proven technology adopted by the rest of the industry and at

the end of this rulemaking EPA should recognize that the work involved in meeting the 2010 NOx standard now merely involves the transfer of well-developed technology and that in fact no technical laggard actually exists.

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To the extent EPA considered this factor in proposing to establish NCPs, it offered an ill-fitting justification. According to EPA, the nonconforming manufacturer is a technical lag -- laggard because of -because it, quote, intends to use a different technology to meet the NOx standard, since it has not yet submitted an application for certification for any model year 2012 heavy-duty diesel engines that would not require emissions credits, end quote. In fact, on January 31st, 2012, the same day that the Interim Final Rule was published in the Federal Register and that NCPs took effect, the nonconforming manufacturer submitted a certification application for .2 gram per brake horsepower hour engine to the EPA. Accordingly, a critical factual predicate of EPA's rulemaking has been proven incorrect on the same day that it published the Interim Final Rule and NPRM in the Federal Register.

Thus, the engine manufacturers apparently have a choice of two technology paths for compliance; the EGR solution to technology solution promoted as capable of

meeting the standard for years by Navistar, or the SCR technology proven by the rest of the industry and used for more than two years. The indisputable existence of either engine technology makes it impossible for EPA to conclude that there is a technological laggard, or that substantial work is still required.

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EPA has not met statutory requirements for determining the appropriate penalty amount. Even if EPA concludes -- erroneously concludes that the regulatory prerequisites have been met, the Agency still must establish a penalty that is at the level expressly required by the Clean Air Act. The Act mandates that any NCPs set by EPA must, quote, remove any competitive disadvantage to manufacturers whose engines or vehicles achieve the required degree of emissions reduction, end quote. The penalty levels set for in the Interim Final Rule and NPRM do not me the statutory obligation. NCP amount proposed by EPA in the NPRM, and set in the Interim Final Rule comes nowhere near approximating the true cost of producing an engine that is compliant with the 2010 NOx standard. EPA's proposal sets a maximum penalty of \$1,919 per heavy-duty engine, for engines that emit more than double the standard. EPA's current figure is a fraction of the \$12,210 penalty established for the same degree of NOx exceedance for the 2004 NOx

standard, which was EPA's most recent NCP rule for heavy-duty engines.

Unlike the 2010 NOx standard, which to date has required a new type of emissions control technology, the entire industry met the 2004 NOx standard using in-cylinder emissions control strategies that had already been developed. EPA has provided no technical explanation for why the current standards, which to date have only been met by new SCR technology, are not more costly than the NCPs for the 2004 NOx standard.

In fact, the NCP level is so low that compliant manufacturers are effectively being forced to consider manufacturing engines that do not meet the NOx standard in order to exploit the competitive advantage afforded by the below-market NOx NCP. The NCP regulations do provide all manufacturers the option of EPA provided NCPs, not just one manufacturer. The only solution for this result is for the agency to ensure that the NCP penalty is in fact high enough to encourage full compliance with the NOx standard by those manufacturers who possess the necessary emissions control technology.

EPA's proposed penalty is too low for a number of reasons. Here we discuss three.

First, baseline engine costs. EPA's NPRM does

1 not adequately reflect the actual cost of incorporating 2 compliant technology in large part because it assumes 3 the baseline engine that already utilizes SCR 4 technology. By the company that needs NCPs -- but the 5 company that needs NCPs does not already have SCR 6 technology in place on any of its U.S. engines. 7 Further, neither did the complying manufacturers utilize SCR technology when the standard was promulgated in 8 9 The complying manufacturers invested in the 10 research and development, hardware components, software 11 infrastructure, and other advancements necessary to design and produce new engine and after-treatment 12 13 designs that are actually compliant with the 2010 NOx 14 standard. Investment that Navistar has thus far chosen 15 not to make. It is unreasonable and unfair to give 16 nonconforming manufacturers the benefit of assuming a 17 baseline engine that incorporates the very technology 18 that they chose not to adopt. By assuming a baseline 19 engine with SCR technology and factoring in only the 20 incremental costs associated with adjusting that SCR 21 technology from a .5 to a .2 gram NOx level, EPA has 22 completely vitiated the NOx -- the NCP calculation and 23 the intent of the Clean Air Act. 24 Second, EPA's approach to fuel economy is

erroneous. EPA has indicated that one of the reasons it

chose an engine with SCR technology as the baseline engine was for the purpose of addressing the wide range of fuel economy performance between engines using different emission control technologies. EPA's fuel economy concerns are misplaced and have resulted in an irrational and arbitrary cost methodology.

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In the past, EPA appropriately attempted to capture all of the additional cost burdens that accrue to compliant manufacturers in tonec -- in connection with the use of compliant engines. These costs included the present value of a compliant manufacturer's reduced fuel economy because purchasers would value compliant trucks less, and this fuel economy penalty would be translated to a reduced purchase price and thus an increased burden on compliant manufacturers. In this case, the company seeking NCPs has repeatedly claims that it -- claimed that its emissions technology results in the same or better net fuel economy -- fluid economy, and thus there is no net benefit to operators associated with SCR. Accordingly, EPA should not predicate its rule on a nonexistent hypothetical baseline engine with SCR simply to address an operating cost disparity that does not exist, according to the company seeking the NCPs.

Thirdly, costs of a compliant engine are

underestimated. EPA's past NCP rulemakings have established a number of costs that the Agency has determined should be included in calculating the level of NCP penalties. These costs include research and development costs, hardware costs, warranty and repair associated costs, revenue impact of additional vehicle weight, and purchaser — purchaser perception effects.

If EPA had included these costs in calculating the penalty level in the NPRM and the Interim Final Rule, it would have identified a penalty at the upper limit that is many times higher than what was included in the proposal. EPA should consult more carefully with compliant manufacturers to ensure that it has captured all of the costs of actual compliance and reflect that significantly higher amount in any final rule that is generated.

We would be happy to share our actual costs with EPA on each of these elements in a setting that ensures that our propri -- proprietary cost information will be maintained as confidential business information by the Agency.

The opportunity for compliant manufacturers to comment on the record is especially important in the context of NCP rulemaking, because the statute authorizing NCPs requires the Agency to ensure that the

1 NCP does not result in any competitive disadvantage to 2 compliant manufacturers. The only way to ensure that is 3 to carefully and thoroughly consult with compliant manufacturers and to fully understand all of the costs associated with their compliance. Thus, we appreciate 6 this opportunity to comment and look forward to 7 providing more detailed input to the Agency on all of these issues. 8 9 MR. GRUNDLER: Thank you, Mr. Keski. 10 Again, I would like to encourage Daimler to 11 share that cost information, just as I would encourage 12 Volvo to share that information. That would be very 13 useful to us. 14 Any questions by the panel? 15 MR. SPEARS: I have no questions. 16 MR. KESKI-HYNNILA: Thank you. 17 MR. GRUNDLER: Thank you. 18 Our last testifier is Mr. Steven Covey from 19 Navistar. Welcome. 20 MR. COVEY: Good morning. I am Steve Covey, 21 Senior Vice President and General Counsel of Navistar, 22 Inc. 23 Navistar appreciates the opportunity to 24 provide input on an issue that is of critical importance 25 to our company. From the outset, let me say that EPA is 40

1 correct in determining that NCPs are necessary and warranted at this time for Navistar and perhaps for 2 3 other manufacturers as well. At Navistar we take our environmental responsibilities seriously. Our perspective is that 6 environmental solutions are something we should worry 7 about so our customers don't have to. Over the past 25 years Navistar has taken the 8 9 lead in this industry in developing sustainable 10 transportation solutions that have resulted in dramatic reductions in NOx and other emissions from our diesel 11 12 engines and vehicles. 13 Navistar is a company of firsts. 14 Navistar pioneered the first North American 15 smokeless diesel engine in 1989. 16 Navistar was the first North American truck 17 manufacturer to go to market with a diesel hybrid 18 solution. 19 Navistar was the first school bus manufacturer 20 to go to market with diesel electric hybrids. 21 Navistar was the first manufacturer to meet 2.2 the 2007 particulate matter and hydrocarbon standards 23 six years ahead with our green diesel technology school 24 bus. 25 Navistar to this date is still the only

manufacturer that offers a plug-in hybrid school bus.

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And Navistar is the first major global manufacturer to bring an all-electric solution to the commercial truck market with its eStar, the first medium-duty commercial vehicle to receive EPA's clean fleet fuel vehicle certification and the California Air Resources Board's zero emissions vehicle certification.

No other truck manufacturer brings as many low emitting diesel, hybrid, natural gas and all-electric solutions to the commercial truck market as Navistar.

Navistar's commitment to environmental leadership extends to the current NOx limits for heavy-duty diesel engines. In 2001 EPA promulgated tough new emission standards for these engines, including a near-zero .2 gram NOx standard. When other diesel engine and truck manufacturers sued EPA to overturn those standards, Navistar and only Navistar fought on the side of EPA to uphold them, including the two-tenths of a gram NOx standard that is now in effect.

At the time the current standard was promulgated in 2001, EPA observed that there were several foreign manufacturers who wanted to use liquid urea-based SCR systems to meet the two-tenths of a gram NOx standard. When EPA published the Final Rule in the Federal Register, however, it noted there were

significant feasibility issues surrounding the effectiveness of such SCR systems, many of which stem from the unique need of driver interaction with the system to replace the urea necessary for the SCR to function.

At that time EPA concluded the two-tenths of a gram NOx standard was infeasible with SCR technology.

That meant if SCR was the only technology available EPA was prohibited by the Clean Air Act from promulgating the two-tenths of a gram NOx standard at all. So EPA looked to other technology, and that is exactly what Navistar did as well.

Navistar decided to do what it has always done for NOx, clean up combustion emissions in the engine rather than rely on an after-treatment device in the exhaust stream. SCR is especially undesirable in Navistar's view because it is unreliable and offloads compliance responsibility to the customers instead of the engine manufacturers. Given the near-zero standard, a clean burning, in-cylinder solution was a significant and capital intensive solution, but that did not deter Navistar from meeting the challenge.

Since 2001 Navistar has devoted tens of thousands of employee hours in the development of a clean burning, in-cylinder solution and invested more

than 700 million dollars in development of a clean burning, in-cylinder solution.

And as a result of that investment, Navistar succeeded in developing a clean NOx technology, advanced exhaust gas recirculation, or EGR, in order to comply with the two-tenths of a gram NOx standard. Navistar is the only manufacturer working to do so.

Navistar rejected off-the-shelf SCR technology because of its inability to achieve the two-tenths of a gram NOx standard on a fleet-wide basis and the increased maintenance and emissions control burden for owners and operators. Navistar also found, among other things, that by comparison to a clean burning engine SCR technology is a primitive and unreliable emission control technology. It is ineffective in many driving situations EPA can expect a heavy-duty diesel engine to encounter in the real world, both on the highway and in urban areas. SCR technology is the wrong choice for customers and for the environment.

In sum, Navistar's choice was not a gamble but a commitment. It was a commitment to an alternative, more reliable emission control technology that stands on its own. It is an alternative that EPA and the public need now and which we predict they will need even more in the future.

As we look down the road, Navistar believes that a complicated system of sensors and algorithms for so-called driver DEF inducements, which ultimately depend on one million truck drivers to keep high levels of NOx emissions from being sent into the air we breathe, will not work. In short, we believe that EPA was correct when it reached precisely this conclusion ten years ago.

Having the Navistar alternative, an engine that meets the standard of the exhaust manifold through clean combustion, will be essential to protect the environment. Advanced EGR technology will become the emission control technology of choice for our competitors after SCR's failure becomes clear.

In sum, Navistar pursued Advanced EGR because it is the superior option for our customers, for the environment, and for our industry. From start to finish we believe it is the manufacturer's responsibility, not the customers, no ensure emissions compliance. Navistar remains fully committed to meeting the current near-zero standard with its clean burning, EGR-only engines, and we believe we have succeeded in doing so.

Navistar supports and needs the proposed NCP rule. Although Navistar submitted an application to EPA for certification of a two-tenths of a gram NOx engine

based on clean-burning, in-cylinder technology, EPA has not yet issued the certificate of conformity. Navistar is working with EPA to resolve technical issues relating to advanced EGR technology, and in particular working to demonstrate that the on-road NOx performance of our technology is superior to the SCR alternative.

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Until Navistar reaches agreement on these issues with EPA, however, we need a temporary bridge to keep some engines and vehicles in the market. As everyone in this room is well aware, that is exactly the purpose of NCPs. Congress provided for NCPs in the Clean Air Act, with a mandate to adopt them, in precisely those situations where a manufacturer who has chosen a different technology path to compliance requires a bridge to stay in the market. Accordingly, Navistar is here today to support the proposed NCP rule.

In the proposed rule, EPA has correctly determined that the NCPs proposed in its Notice of Proposed Rulemaking for model year 2012 and later diesel engines are necessary because for technological reasons Navistar needs NCPs to ensure continued production for certain families of its heavy-duty diesel engines.

Temporary relief is required so that a better environmental and customer solution is possible.

EPA's long-established criteria for

promulgating NCPs are clearly met in this case. That

Navistar is the manufacturer most likely to sell engines

and pay NCPs is irrelevant. Where NCPs are concerned,

Congress and EPA expressly contemplated a situation

where some manufacturers have been certified to meet a

particular standard while other manufacturers need a

bridge to certification.

Congress prescribed a solution of a penalty to account for differences in the costs of compliance between those who chose one path and those who chose the more difficult path, not the ouster of any competitor from the market. In other words, EPA's proposed rule fulfills a mandate delivered by Congress to EPA.

In this case, because Navistar invested as much, or more, in NOx compliance as any of its competitors, and because Navistar's solution actually provides superior on-road NOx control, EPA's proposed NCPs are, in our view, too high. The NCP calculation used by N -- EPA significantly undervalues the huge investment that Navistar already has made in its clean-burning combustion technology.

Moreover, Navistar rejects the suggestion that there is a competitive disadvantage to the SCR engine makers, just as we reject the idea that they are the technological leaders here. The only competitive

1 disadvantage is to Navistar, not the SCR makers who used 2 an off-the-shelf technology that purportedly meets the 3 standard in the test cell but pollutes heavily on the 4 highway, a reality that is currently ignored in SCR certification testing. We will, of course, submit more detailed 6 7 written comments in support of this rulemaking. We look forward to working with EPA on the next steps. And I 8 9 thank you. 10 MR. GRUNDLER: Thank you, Mr. Covey. Any 11 questions for Navistar? 12 MR. MOULIS: (Indicating). 13 MR. SPEARS: Just a second. I have one 14 question. Thank you very much. I just had one 15 clarifying question. 16 We heard in some earlier testimony that a 17 subsidiary of Navistar is producing or has available an 18 engine with the SCR technology. Would you care to 19 comment or clarify that statement at this time? 20 MR. COVEY: Thank you. I appreciate the 21 question. We'll, of course, provide information 22 regarding that testimony in our written comments, but 23 generally speaking, yes, the answer is yes. 24 MR. SPEARS: Okay. Thank you. MR. GRUNDLER: No further questions? 25 Thank 48

1	you, Mr. Covey.
2	MR. COVEY: Thank you.
3	MR. GRUNDLER: Two points before we wrap up.
4	One, if you didn't get a chance to sign in or if you
5	would like to get written comments of this testimony,
6	please see JoNell over there.
7	Secondly, a reminder that we'll keep the
8	record open until April 4th for any supplemental or
9	rebuttal testimony.
10	Thank you very much. This concludes our
11	hearing.
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13	(11:08 a.m. hearing concluded.)
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K-A-Y-E-S [1] 6/3 KAYES [3] 5/25 5/25 6/3 keep [3] 45/4 46/9 49/7 Ken [1] 2/11 kept [1] 4/9 Keski [4] 6/13 27/24 28/1 40/9	low [5] 8/3 16/16 36/11 36/23 42/8 lower [3] 12/15 23/13 31/9 M Mack [9] 17/19 17/24 21/20 23/4 24/12 26/6 26/9 26/25 27/5 made [4] 10/19 14/16 33/15 47/20	29/13 32/18 34/2 35/1 43/22 45/20 meets [3] 25/18 45/10 48/2 members [3] 1/14 4/20 5/4 merely [2] 33/20 34/3 merited [1] 22/16 met [16] 18/13 19/14 20/2 26/13 28/22 29/5 29/7 29/10 30/2 30/9 32/14 35/7
K-A-Y-E-S [1] 6/3 KAYES [3] 5/25 5/25 6/3 keep [3] 45/4 46/9 49/7 Ken [1] 2/11 kept [1] 4/9	low [5] 8/3 16/16 36/11 36/23 42/8 lower [3] 12/15 23/13 31/9 M Mack [9] 17/19 17/24 21/20 23/4 24/12 26/6 26/9 26/25 27/5	29/13 32/18 34/2 35/1 43/22 45/20 meets [3] 25/18 45/10 48/2 members [3] 1/14 4/20 5/4 merely [2] 33/20 34/3 merited [1] 22/16 met [16] 18/13 19/14 20/2 26/13 28/22
K-A-Y-E-S [1] 6/3 KAYES [3] 5/25 5/25 6/3 keep [3] 45/4 46/9 49/7 Ken [1] 2/11 kept [1] 4/9 Keski [4] 6/13 27/24 28/1 40/9 Keski-Hynnila [1] 28/1 knew [1] 24/23 know [2] 10/8 13/25	low [5] 8/3 16/16 36/11 36/23 42/8 lower [3] 12/15 23/13 31/9 M Mack [9] 17/19 17/24 21/20 23/4 24/12 26/6 26/9 26/25 27/5 made [4] 10/19 14/16 33/15 47/20 main [1] 12/17 maintained [1] 39/20 maintaining [1] 13/21	29/13 32/18 34/2 35/1 43/22 45/20 meets [3] 25/18 45/10 48/2 members [3] 1/14 4/20 5/4 merely [2] 33/20 34/3 merited [1] 22/16 met [16] 18/13 19/14 20/2 26/13 28/22 29/5 29/7 29/10 30/2 30/9 32/14 35/7 35/10 36/5 36/9 47/1 methodology [2] 15/7 38/6 Mexico [1] 24/17
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